

AMENDMENTS TO THE SPECIFICATION:

Please replace paragraph [7] with the following amended paragraph:

[0007] In one embodiment of the invention, a multi-channel filtering system for use [[with]] in a transceiver is presented. The multi-channel filtering system includes a front-end multi-pole, multi-throw switch, a back-end multi-pole, multi-throw switch, and a plurality of filters coupled therebetween. The front-end switch includes a receive pole, a transmit pole, and a plurality of switch throws. The back-end switch also includes a receive pole, a transmit pole, and a plurality of switch throws. Each of the plurality of filters has first and second ports, each first port coupled to one of the switch throws of the front-end switch, and each second port coupled to one of the switch throws of the back-end switch. Using this configuration, filters of differing bandwidths can be switched in during signal reception and/or transmission, thereby tailoring the communication rate to the particular interference and data transmission rate conditions.

In one embodiment of the invention, a multi-channel system for use with at least one of a receive channel and a transmit channel comprises: a front-end multi-throw switch, comprising: a plurality of front-end throws; and at least one front-end pole configured to couple to one of a receive channel and a transmit channel at a first location, the at least one front-end pole switchably coupled to one of the plurality of front-end throws; a back-end multi-throw switch, comprising: a plurality of back-end throws; and at least one back-end pole configured to couple to the one of the receive channel and the transmit channel at a second location, the at least one back-end pole switchably coupled to one of the plurality of back-end throws; and a plurality of filters interposed between the front-end multi-throw switch and the back-end multi-throw switch, each of the plurality of filters having a first port coupled to one of the plurality of front-end throws and a second port coupled to one of the plurality of back-end throws.

Please replace paragraph [14] with the following amended paragraph:

[0014] In a particular embodiment, filters F₁-F_N comprise filters of differing bandwidths to enable a selection between a narrower channel bandwidth, and accordingly greater adjacent channel noise rejection, or a wider channel bandwidth, and a corresponding faster communication

data rate. Further, a particular filter may be selected during signal transmission, and a different filter selected during signal reception. The filters may comprise any particular filter type (e.g., lowpass, bandpass, highpass, bandstop, notch, etc.), and in an exemplary embodiment comprise bandpass filters. Further, the filters 240 may be located external to, or integrated with, the front and back-end switch 220 and 260. For example, in one embodiment the front and back-end switches 220 and 260 and filters 240 are integrally formed in a monolithic integrated circuit. In another embodiment, front and back-end switches 220 and 260 are implemented as integrated circuits, and filters [[140]] 240 comprise discrete filters, such as surface acoustic wave (SAW) filters. These configurations are only exemplary, and those skilled in the art will appreciate that the present invention may be employed in alternative implementations under the present invention as well.

Please replace paragraph [18] with the following amended paragraph:

[0018] The transceiver front end 330 further comprises transmit channel components including a buffer amplifier 335, mixer 336, and a power amplifier 337. In a particular embodiment, the front-end source 333 is shared between the receive and transmit channels for component reduction and cost savings. Alternatively, a separate frequency source can be used to supply the reference signal to mixer 336. The buffer amplifier 335 provides impedance-matching and enhanced isolation at the interface of the multichannel filtering system. Mixer 336 and reference source 333 operate to frequency translate the transmit signal 373 to a carrier frequency. Power amplifier 337 amplifies the magnitude of the carrier frequency signal to the transmission power, and the resulting carrier signal 374 is produced. The power amplifier 337 may comprise linearization or predistortion circuitry, as known [[if]] in the art.